Tuesday, October 23, 2012

Pavillion Area DEQ Maps

Corrections or Changes:

The following are the wells that have gas on the casing annulus. Please note this gas does not represent a failure. The Bradenhead testing is not a pass-fail test. It is to find out if gas is present, could it indicate a casing or cement failure from the productive interval. The gas found in the annulus is different from the production gas in every well. These show the wells have adequate bond and no leakage from the productive interval. A Mechanical Integrity Test (MIT) and temperature logs are next run, to help determine failure. Please take "Fail" off the maps.

The wells with bradenhead gas are as follows: 13-1, 22-1, 13-2B (now missing), 13-2, 32-2, 33-2B (now missing), 22-2 (missing), 32-3, 44-3C, 43-4, 44-3, 12-5, 43-9, 13-10, 31-10, 32-10C, 41-10B (not 41-10),42-10B, 44-10, 12-11W, 12-11 (missing and not 12-13), 21-11 (missing), 32-11 (missing), and 41-11B.

The following wells do not belong on the maps and had no bradenhead gas: 22-11, 12-13 (a Plugged Abandoned well), 41-10, 21-10, 33-2, 13-3W. PGDW 32 and 33 are not near any wells with bradenhead gas.

These need to be corrected, so we aren't looking at the wrong wells both water and gas.

The Pavillion gas field area is incorrect and shows the field to be much larger than it is. The WGA Guidebook for the Wind River Basin from 1989 is much more accurate and encompasses only about 5800 acres. The current outline goes over acreage proven unproductive and extends into the Muddy Ridge field and its structure.

I would suggest we standardize our distances from gas wells to water wells. The EPA uses and the WOGCC usually uses ¼ mile. WOGCC now uses ¼ mile from the drilling and spacing unit which doesn't conform to anything. I suggest ¼ mile from water well to gas well.

The definition of shallow casing has not been established. WOGCC uses the definition of 100-120 feet deeper than the deepest water well within the ¼ mile distance or to be set shallower than the shallowest estimated gas shows. If a surface casing is set at a shallow depth the WOGCC usually requires the production casing cement top to be above the potentially productive or shallowest gas found. The bradenhead test helped find those wells.

The BLM and The WOGCC use yellow for Federal minerals and surface and Orange for tribal minerals and surface, Blue for state and white for fee minerals and surface. Hachured is used for mixed surface and minerals. Could we all use these?

Additions:

The following wells also flowed water up the annulus and samples were collected and analyzed for: Anions, Cations, and Physical Properties; 13-1, 13-2, 44-10, and 12-11W. Three showed low TDS water with an 8.5 to 9.5 pH. 13-1 has a 10.86 pH and a TDS of 30,000. Did the DEQ or the EPA test the water

wells for Anions, Cations and pH? I believe iron and maybe others were left off the EPA tests. Due to the nature of the annular space most other constituents can't be tested accurately like a monitor well.

Can the map of the area of interest be expanded and the Key shrunk?

Hydrocarbon detect is good to note but is probably only indicative of a naturally occurring problem. What other constituents are we looking for? Which are mappable?

Finally, Can we distribute the shape files?